moderately increased. It is probable here that Wohlgemuth's suggestion that the salivary diastase, escaping destruction in the stomach, accounts for the increase, is correct. With hyperacidity normal values are again found. Continuous hypersecretion of the stomach, whether accompanied by hyperacidity or not, is usually associated with a similar hypersecretion of pancreatic juice. In this condition the urine may contain 50 to 800 units of diastase, with simultaneous increase of fecal diastase to 2000 units and more. This shows that examination of the urine alone may lead to error, since increase of diastase occurs with gastric hypersecretion as well as with diseases of the pancreas. There is, however, this important difference: While with pancreatic disease, the amylolytic enzyme of the feces is totally lacking or present only in traces, with gastric hypersecretion fecal amylase is very greatly increased. It is evident, therefore, in the application of this diagnostic procedure that determinations of diastase should be made on both urine and feces in doubtful cases.

A New Method for the Determination of Total Nitrogen in Urine. —O. Folin and C. J. Farmer (*Jour. Biol. Chem.*, 1912, xi, 493) describe a method for determination of total nitrogen in the urine, which, in principle, is a microchemical method based on the Kjeldahl-Gunning process for decomposing nitrogenous materials and on the methods of Nessler and of Folin for the determination of ammonia. *Method:* "Five c.c. of urine are measured into a 50 c.c. measuring flask if the specific gravity of the urine is over 1.018, or into a 25 c.c. flask if the specific gravity is less than 1.018. The flask is filled to the mark with water and inverted several times to secure thorough mixing. One c.c. of the diluted urine is then measured into a large test tube made of Jena glass (size 20 to 25 mm. by 200 mm.). To the urine in the test tube add 1 c.c. of concentrated sulphuric acid, 1 gram of potassium sulphate, 1 drop of 5 per cent. copper sulphate solution, and a small, clean quartz pebble (to prevent bumping). Boil over a micro-burner for about six minutes, *i. e.*, about two minutes after the mixture has become colorless. Allow to cool about three minutes, until the digestion mixture is beginning to become viscous (it must not be allowed to solidify). Then add about 6 c.c. of water, at first a few drops at a time, then more rapidly, so as to prevent the mixture from solidifying. To the acid solution is then added an excess of sodium hydrate (3 c.c. of saturated solution) and the ammonia is aspirated by means of a rapid air current into a measuring flask (volume 1000 c.c.) containing about 20 c.c. of water and 2 c.c. of $\frac{n}{10}$ hydrochloric acid. The air current used for driving off the ammonia may well be rather moderate for the first two minutes but thereafter for eight minutes should be as rapid as the apparatus can stand. Now disconnect, dilute the contents in the flask to about 60 c.c., and dilute similarly 1 mgm. of nitrogen in the form of ammonium sulphate, to about the same volume in a second measuring flask. Nesslerize both solutions as nearly as possible at the same time with 5 c.c. of Nessler's reagent diluted immediately before hand with about 25 c.c. of water. (Five c.c. of Nessler's reagent gives the maximum color with 1 to 2 mgms. of ammonia, and when diluted as indicated, turbidity is avoided.) The color produced does not react the maximum till the end of about half an hour, but the increase is small and is immaterial to the result when the reagent is added as described, *i. e.*, practically simultaneously to the standard and to the unknown ammonium salt solution. The two flasks are therefore at once filled to the mark with distilled water, mixed, and the relative intensity of the colors is determined by means of a colorimeter . . . The reading of the standard divided by the reading of the unknown gives the nitrogen in milligrams in the volume of urine taken." For further details, the original should be consulted. The ammoniun sulphate used as the standard must be be specially prepared, as described by the authors.

The Radiologic Examination of the Apices of the Lungs. The "Cough Phenomenon."—S. Krenzfuchs (*Münch. med. Woch.*, 1912, lix, 80) refers to the well-known facts that apices of individuals with long thorax and wide intercostal spaces are clear in health, whereas with a short thorax and narrow interspaces there is usually a shadow over the apices on radiologic examination. In the latter instance it is claimed by some that the shadows disappear during deep respiration, though Krenzfuchs finds such a result exceptional. He has noted, however, that normal apices, which cast shadows—whether from atelectasis or from the conformation of the thorax—become clear when the patient coughs. This clearing of the apices during cough he designates the "cough phenomenon." (Hustenphänomen). The explanation of the phenomenon is as follows: The deep inspiration preceding the cough fills the lower parts of the lungs. With the cough, the contracture of the abdominal muscles and the passive elevation of the diaphragm force the air into the apices of the lungs, since the glottis is closed. Inflation of the apices is the result. The examination is made with a soft tube and weak current. During cough, the head is turned away from the apex examined, when the antero-posterior position is used. The value of the "cough phenomenon" is chiefly in the differentiation between atelectatic and infiltrated apices. The former become clear during cough, while the latter remain dark or clear only partially.

On the Determination of Ammonia in Urine.—O. Folin and A. B. Macallum (*Jour. Biol. Chem.*, 1912, xi, 523) have devised a new method for the quantitative estimation of ammonia in the urine. "Into a test tube measure by means of Ostwald pipettes 1 to 5 c.c. of urine. (The volume taken should give 0.75 to 1.5 mgms. ammonia-nitrogen. With normal urine 2 c.c. will most often give the desired amount. With very dilute urines 5 c.c. may be required, while with diabetic urines rich in ammonium salts even 1 c.c. may give too much, and the urine must be diluted). Add to the urine a few drops of a solution containing 10 per cent. of potassium carbonate and 15 per cent. of potassium oxalate, and a few drops of kerosene or heavy, crude machine oil (to prevent foaming). Pass the strong air current through the mixture for ten minutes (or as long as is necessary to drive off all the ammonia) and collect the ammonia in a 100 c.c. measuring flask containing about 20 c.c. of water and 2 c.c. of $\frac{n}{10}$ acid. Nesslerize as described under total nitrogen and compare with 1 mgm. of nitrogen obtained from a standard ammonium sulphate solution and similarly Nesslerized."